



The Opioid Epidemic: Madison County, NY



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Executive Summary

This report provides a snapshot describing the current state of the opioid epidemic in Madison County, New York. Updating this report can help identify trends and offer insight into the effectiveness of local, state, and national prevention activities. The goal of this report is to help guide and inspire conversations about actions, initiatives, and policies aimed at reducing the burden of opioids within our community. Due to the COVID-19 pandemic, this report includes data from 2020 and 2021.

Some key points outlined in the report include:

- On a national and state-level, synthetic opioids (e.g. fentanyl) have surpassed both heroin and prescription opioids in terms of opioid-related overdose deaths.
- The number of opioid-related overdose deaths have fluctuated in Madison County since 2016 with the most recent uptick in 2020. Despite the increase, Madison County has the lowest death rate among Central New York counties.
- After a decreasing trend in hospitalization admissions rates for opioids in Madison County between 2016 and 2018, there was an increase in 2019 followed by a slight decrease in 2020. Conversely, emergency department visits related to opioid overdoses increased in 2019 and again in 2020.
- Despite a decrease in the rate of neonatal withdrawal syndrome among newborns in 2018, the three-year average rate demonstrates a three-fold increase between 2012-2014 and 2016-2018.
- The rate of opioid prescribing continues to decrease on a national, state, and county level.
- In 2018, 88% of Madison County youth report that using prescription drugs without a doctor's prescription can cause some or a lot of harm, compared to 74% in 2014.
- There are several ongoing initiatives to support treatment, recovery, and prevention of opioid misuse in Madison County. Additionally, there are planning efforts underway to develop new programs and expand current ones utilizing the funding from the New York State Opioid Settlement.

Background

The evolving nature of the opioid epidemic has three distinct waves (Fig 1). The 1990s marked the rise of prescription opioids, including oxycodone (OxyContin®), hydrocodone (i.e. Vicodin®), and methadone (CDC, 2021). The number of prescription opioids sold to pharmacies, hospitals, and doctors' offices nearly quadrupled between 1999 and 2010, despite studies at the time that indicated no change in the amount of pain reported by Americans (California Legislative Information, 2018).

Anyone who takes prescription opioids is susceptible to addiction. Once addicted, it can be challenging to stop. In fact, as many as one in four patients receiving long-term opioid therapy in a primary care setting struggle with opioid addiction (CDC, 2021). In 2016, more than 11.5 million Americans reported misusing prescription opioids in the same year. The Centers for Disease Control and Prevention (CDC) estimates more than 1,000 people are treated in emergency departments across the country for misusing prescription opioids. In 2010, dramatic increases from heroin-involved deaths occurred (Wave 2). Individuals at highest risk for heroin addiction include those with concurrent addiction (i.e. prescription opioids, cocaine, alcohol).

Wave 3 of the opioid epidemic is characterized by the spike in overdose deaths involving synthetic opioids other than methadone (e.g., illicitly manufactured fentanyl). From 2016 to 2017 alone, synthetic opioid-involved overdose deaths increased by 45.2% (CDC, 2019). Fentanyl has contributed to the rising number of fatal and non-fatal drug overdoses due to its high potency— 50 to 100 times more potent than morphine or any other opioids (NIH, 2021). Fentanyl has also been mixed with powdered heroin and cocaine before being pressed into counterfeit pills that resemble OxyContin and other prescription drugs (NIH, 2021).

The opioid overdose epidemic in the United States is characterized as a multi-layered problem. It is pervasive, spanning across all socio-economic, cultural, and geographic boundaries, and its prominent effects ripple across all aspects of our society.



Figure 1. Rise in Opioid Overdose Deaths in America.

Source: Centers for Disease Control and Prevention (CDC). Accessed 8/2021.

The Heart of the Epidemic

Overdose Deaths

The national increase in deaths from opioid overdoses is dramatic (Fig 2). Between 1999 and 2019, more than 1,700,000 people died from a drug overdose, with nearly 70% of those involving a prescription or illicit opioid. There has been a 5-fold increase in the annual number of overdose deaths in those twenty years. It is estimated that 38 people die each day from overdoses involving prescription opioids. The economic burden of opioid overdose, abuse, and dependence is estimated to be \$786.8 billion each year in the United States.

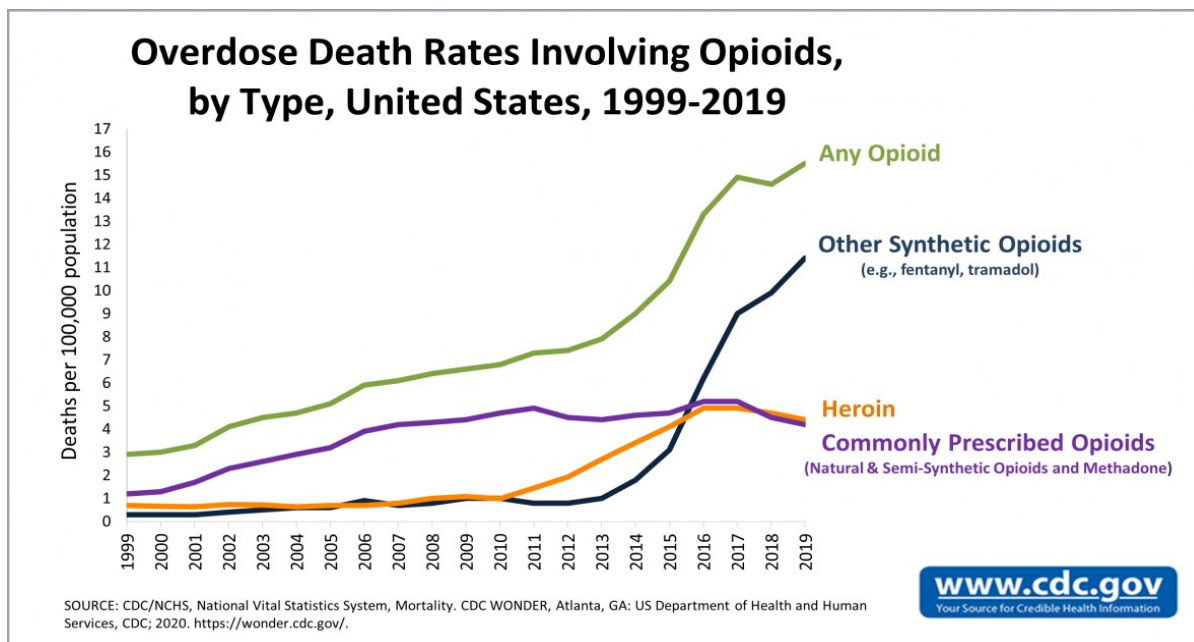


Figure 2. Annual overdose death rates due to opioids in the United States, 1999-2019. Source: CDC, Opioid Data Analysis. Accessed: 11/2021.

Increased awareness and ongoing efforts to combat the opioid crisis have contributed to improvements; however, effects of the COVID-19 pandemic have increased overdose death rates. Drug overdose deaths increased by 28.5% in 2020, topping 100,000 deaths annually. This jump from 2019 to 2020 was the largest single-year percentage increase on record since 1999 (Fig 3, pg 7). Among drug overdose deaths, those related to opioids increased by 35% from 2019, accounting for 75,673 deaths in the United States.

On a national level, the age-adjusted rate of overdose deaths involving any opioid was 21.4 per 100,000 in 2020. Men were affected at a greater rate than women (30.4 versus 12.3 per 100,000 respectively). For the first time since 2000, the age-adjusted rate among Black, non-Hispanic individuals was higher than the rate among White, non-Hispanic individuals. There was also a 55% increase among non-Hispanic, American Indian or Alaska Native individuals.

Synthetic opioids (excluding methadone) accounted for 56,516 deaths or 60% of all overdose deaths in 2020, more than from any other type of opioid and up by 54% from the previous year. Prescription opioids, including natural and semi-synthetic opioids (e.g., oxycodone and hydrocodone) and methadone, were the second most common with 16,000 deaths in the same year.

Overdose Deaths (cont.)

Overdose deaths spiked throughout 2020 during the beginning of the COVID-19 pandemic and remained higher than past trends (Commonwealth Fund, 2021) (Fig 3). Deaths involving cocaine and other psychostimulants like methamphetamine also rose dramatically.

It is worth noting that for every 1 in 5 drug overdose deaths, no specific drug is listed on the death certificate. Consequently, researchers speculate total number of opioid-related overdose deaths to be underestimated by at least 30%.

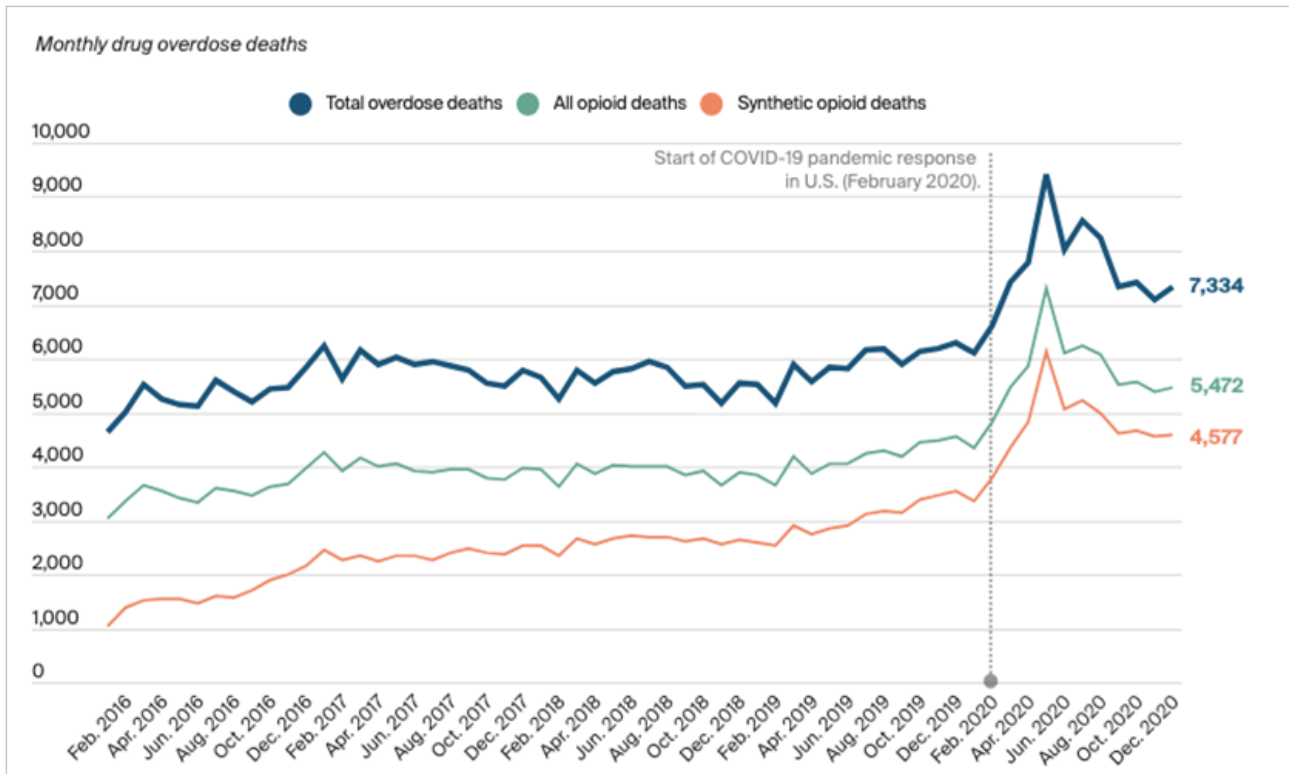


Figure 3. Monthly overdose deaths due to opioids in the United States, 2016-2020. Source: Commonwealth Fund, Opioid Data Analysis. Accessed 11/2021.

The most recent available data from New York State (2018) indicated nearly 3,000 opioid overdose deaths, most involving synthetic opioids (other than methadone). The age adjusted rate was 15.1 per 100,000, demonstrating a decline in state-wide opioid overdose deaths. Despite this, increased presence of illicit Fentanyl is cause for concern.

Overdose Deaths (cont.)

All of the counties in the Central New York region have been affected by the opioid epidemic. Annual overdose death rates have fluctuated and often exceed rates in the remainder of NYS (excluding NYC) (Fig 4). The 2020 annual overdose death rate in Madison County was 14.0 per 100,000 population. Although this rate remains lower than surrounding CNY counties, Madison County observed the largest increase in overdose death rate to date between 2019 and 2020 (5.6 to 14.0 per 100,000 population) (Fig 4).

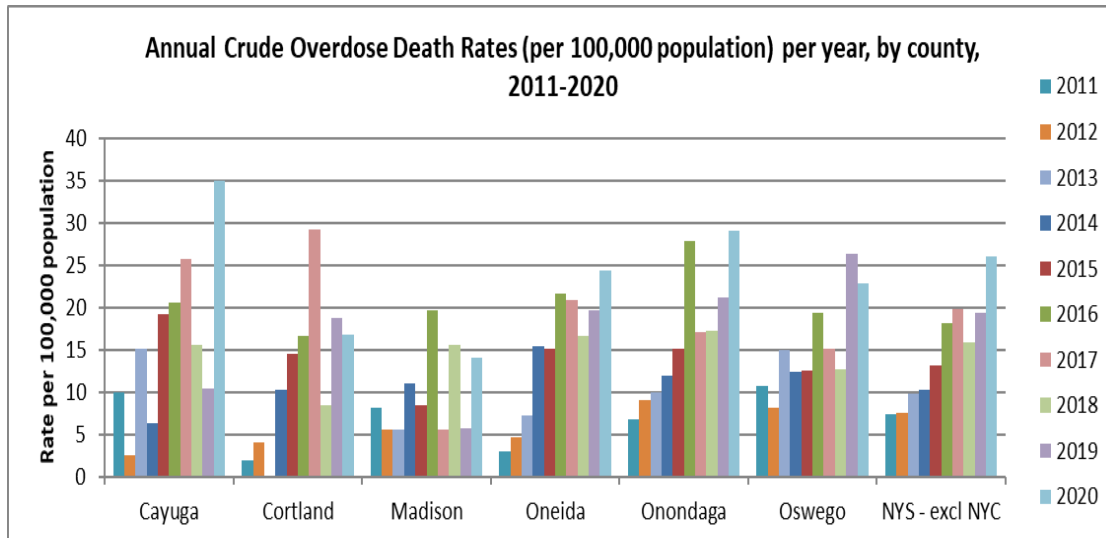


Figure 4. Annual overdose death rate among Central New York counties compared with NYS (excluding NYC), 2011–2020. Source: 2010-2013 — NYSDOH Vital Statistics; 2014-2020 — NYSDOH, New York State County Opioid Quarterly Reports. Accessed 10/2021.

There has been an increase in the number of all opioid overdose deaths and of substance specific overdose deaths. Overdose deaths involving opioid pain relievers appear to be increasing rapidly, more than doubling from 2019 to 2020 (Fig 5).

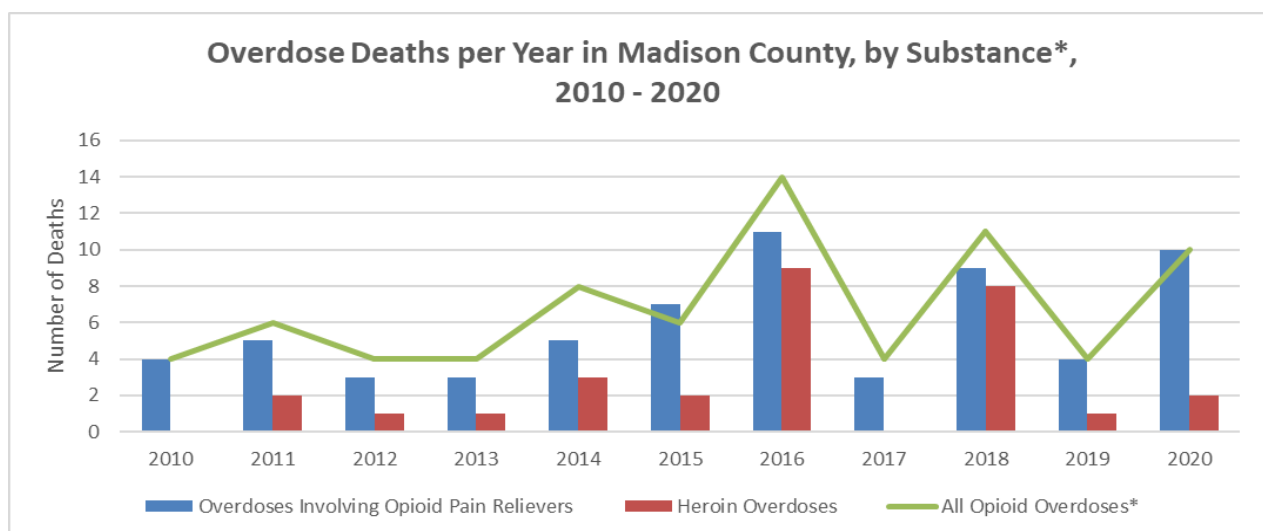


Figure 5. Annual overdose deaths by substance, Madison County, 2010-2020. *Indicators are not mutually exclusive. Decedents and patients may have multiple substances in their system. Thus, overdoses involving heroin and overdoses involving prescription opioid pain relievers will not add up to the overdoses involving all opioids. Source: 2011-2013 — NYSDOH Vital Statistics; 2014-2020 — NYSDOH, New York State County Opioid Quarterly Reports. Accessed 11/2021.

Effects on the Healthcare System

Hospitalization and Emergency Department Visit Rates

Although overdose deaths drive the conversation about the national opioid epidemic, the toll on the healthcare system has also been significant. According to FAIR Health, the aggregated dollar value of charges for opioid-related diagnoses rose over 1,000 percent from 2011 to 2015 on a national level. Of the \$786.8 billion in societal costs attributed to opioid use disorder, \$89.1 billion was accounted for by specifically healthcare expenditures. Opioid abuse diagnoses lead to hefty emergency department and hospitalization charges, while opioid dependence involve significant laboratory tests, office outpatient follow-ups, and maintenance therapy charges.

Nationally, the cost of opioid-related visits and hospitalization continues to increase each year. In 2016, the largest proportion of fatal and non-fatal drug related poisonings was caused by opioid overdoses. Across 2017 and 2018, 2.88 million (1.23%) adult visits to emergency departments (EDs) were related to either overdoses (27.5%) or opioid-related diagnosis (72.5%). ED expenditures total an estimated \$4.78 billion annually. Medicaid and Medicare were billed for 66% of opioid-related charges during those years.

Hospitalization and ED visits in New York State related to opioid overdoses are monitored by the Statewide Planning and Research Cooperative System (SPARCS). Hospital admission rates in NYS (excluding NYC) began to decline in 2018 and have since stabilized. Hospital admissions across Central New York (CNY) have moved in opposition to statewide trends, demonstrating a sharp increase beginning in 2019. Madison County has demonstrated a relatively stable trend from 2019-2020 (Fig 6).

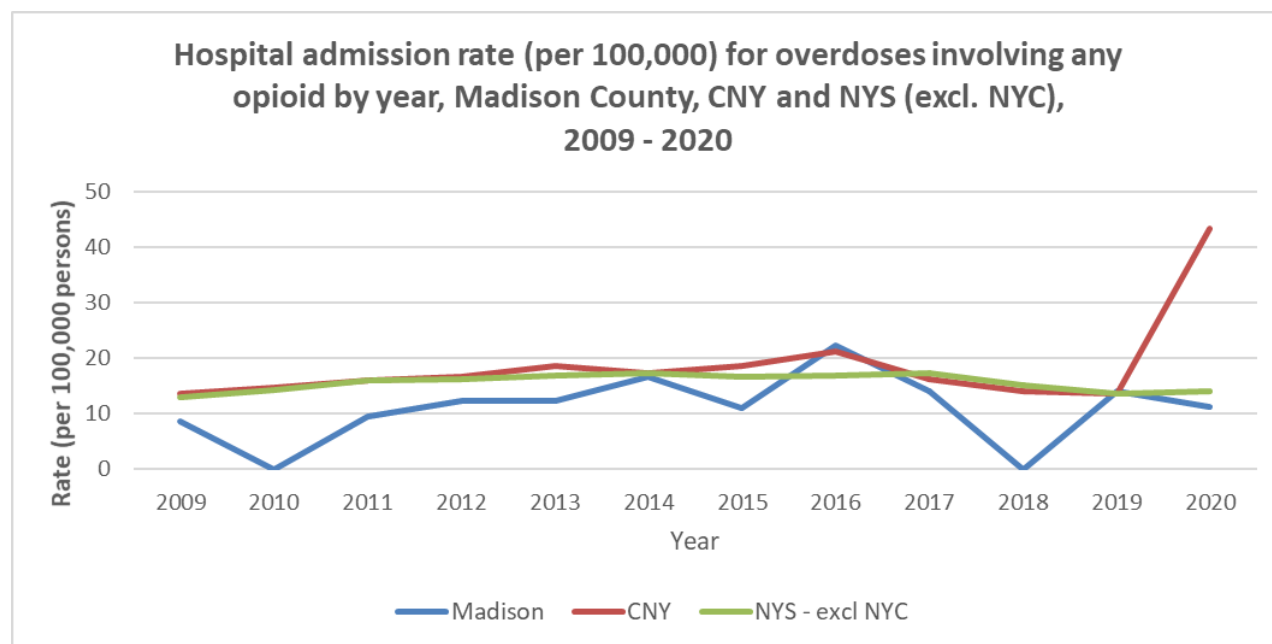


Figure 6. Annual inpatient hospitalization admissions rates due to a opioid overdose in Madison County, CNY, and NYS (excluding NYC) from 2009 – 2020. Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 10/2021.

ED visit rates due to opioid overdose have increased steadily since 2009, peaking in 2016. CNY and Madison County rates have been similar to state trends most years; however, beginning in 2017, Madison County's ED visit rate has been lower than the state and CNY region (Fig 7, pg 10).

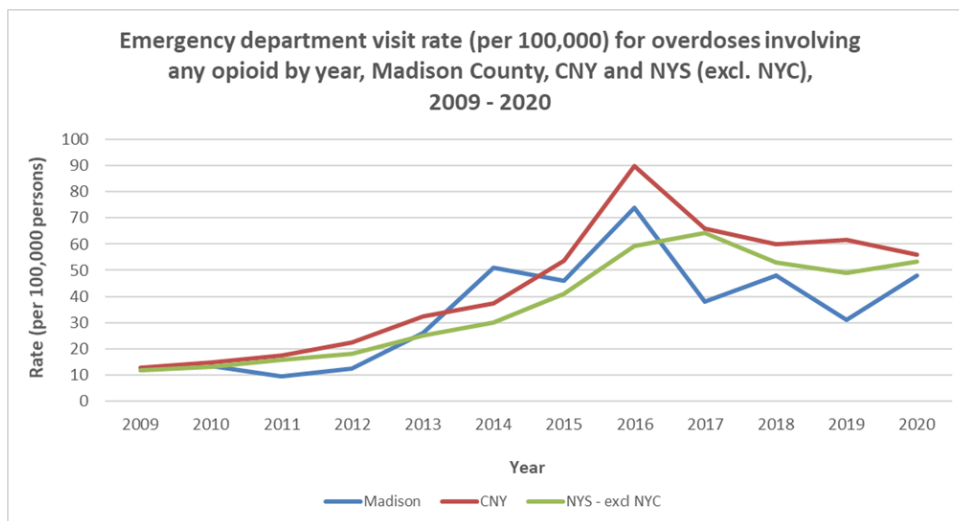


Figure 7. Annual emergency department visit rates due to a opioid overdose in Madison County, CNY, and NYS (excluding NYC) from 2009 – 2020. Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 10/2021.

Neonatal Abstinence Syndrome

Neonatal abstinence syndrome (NAS) was first described in the 1970s and affects newborns who have been exposed to certain drugs in the womb. These infants experience withdrawal symptoms after birth. Infants diagnosed with NAS stay an average of 16.45 days in the hospital and are at risk for long-term effects on motor, behavioral, and cognitive functioning (Logan 2013, Maguire 2016). Nationally, the number of babies diagnosed with NAS tripled between 2009 and 2016 (Ramphul 2020).

While this syndrome has been recognized for more than four decades, there has been a dramatic increase in prevalence over the past 10 years. Research shows that this increase is caused by the rise in opioid use during pregnancy, attributed to more liberal use of prescribed opioids for pain control in pregnant women, illicit use of opioids such as heroin, and opioid-substitution programs for the treatment of opioid addiction.

Beginning in 2013, Madison County has experienced a higher rate of NAS among newborn babies than NYS (excluding NYC), as indicated by hospital discharge rates (Fig 8). Despite a decrease in the rate of neonatal withdrawal syndrome among newborns in 2018, the three-year average demonstrates a three-fold increase between 2012-2014 and 2016-2018.

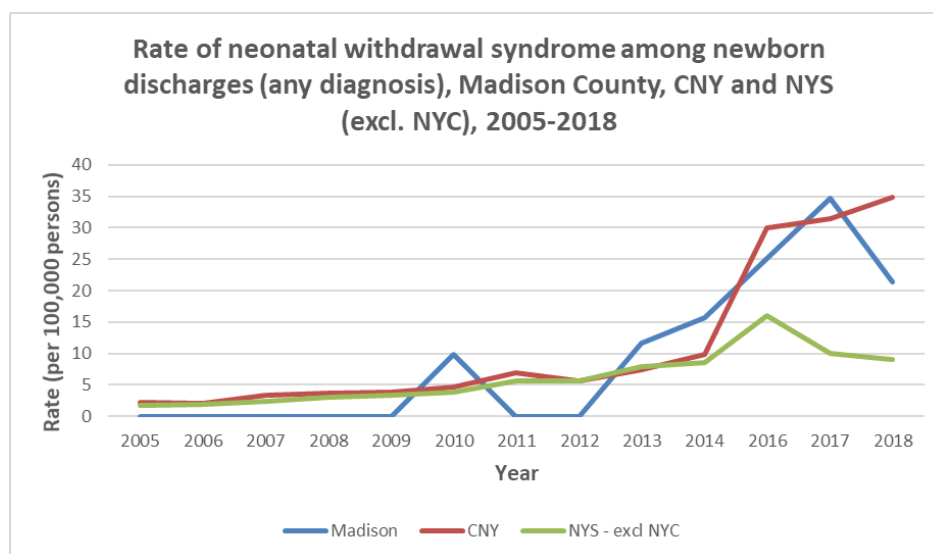


Figure 8. Rate of Neonatal Withdrawal Syndrome among Newborn Discharges (any diagnosis), Madison County, 2005 – 2018. Source: NYSDOH, Opioid-related Data in New York State. Accessed 10/2021. *2015 data excluded due to transition from ICD-9 to ICD-10

Access to Opioids

Opioid Prescribing—National Trends

In the United States, an estimated 1 out of 5 patients with non-cancer pain or pain-related diagnoses are prescribed opioids in office based settings. National prescribing rates are highest among pain medicine (49%), surgery (37%) and physical medicine/rehabilitation (36%) practices. Primary care providers account for about half of the opioid pain relievers dispensed, with hospitals and health clinics also utilizing short-acting opioid analgesics with long-term risk of addiction. Long-term use of opioid pain relievers can be associated with both abuse and overdose risk.

A 2019 study (Schieber et al., 2019) assessed both temporal trends and geographic variations in opioid prescribing measures between 2006 and 2017. Primary outcomes were annual amount of opioids prescribed in morphine milligram equivalents (MME) per person; average duration per prescription in days; and 4 separate prescribing rates—for prescriptions 3 or fewer days, those 30 days or longer, those with a high daily dosage (≥ 90 MME), and those with extended-release and long-acting formulations.

The key takeaways from this study are:

- In 2018, 15.0% of the U.S. population filled one or more opioid prescriptions.
- Rate of opioid prescriptions filled increased nearly 2% annually from 2006-2012. From 2012 to 2016, the rate decreased by 5.2% annually. Starting in 2016, the rate decreased sharply by 12.4% annually from 2016 to 2018.
- The annual rate for filling high dosage opioid prescriptions (≥ 90 morphine milligram equivalents [MME]/day) decreased by 66.1% from 2006 to 2018.
- Between 2006 and 2018, average days of supply per prescription filled increased from 13.3 to 18.4 days, an overall relative increase of 37.6%. Figure 9 illustrates this change for the years of 2006, 2010, and 2017.

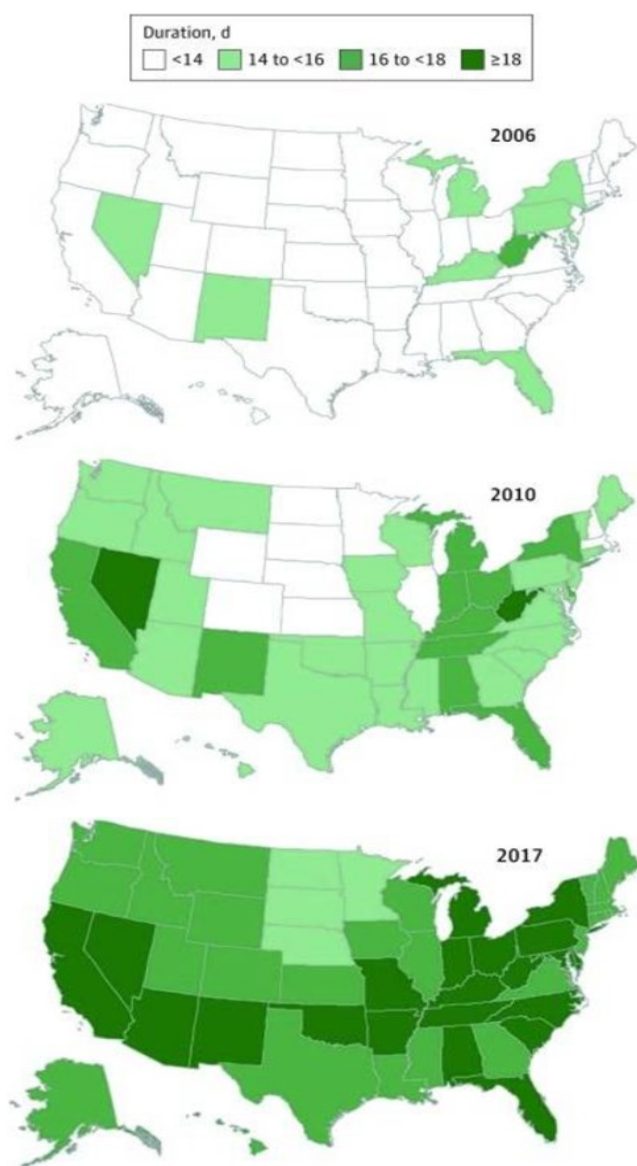


Figure 9. Changes in average duration per opioid prescription for years 2006, 2010, and 2017 in the United States. Source: Trends and Patterns of Geographic Variation in Opioid Prescribing Practices by State, United States, 2006-2017.

New York State Prescribing Trends

Information on New York State (NYS) opioid prescribing is collected from the online New York State (NYS) Prescription Monitoring Program Registry (PMP), maintained by the NYS Department of Health's Bureau of Narcotic Enforcement. The registry collects dispensed prescription data for controlled substances in schedules II, III, and IV that are reported by more than 5,000 separate dispensing pharmacies and practitioners registered with NYS. Any NYS licensed prescriber, excluding veterinarians, is required to consult the PMP registry when writing prescriptions for Schedule II, III, and IV controlled substances.

Since the introduction of the Prescription Monitoring Program Registry there has been a 53% decrease in the proportion of patients receiving an opioid prescription, with no change in average number of patients included. Opioid prescription rates in NYS (excluding NYC), Central New York and Madison County peaked in 2016 following a steady trend. Rates have steadily declined since, dropping below the baseline rates that were first measured in 2012. Madison County's prescribing rates are consistently higher than overall rates for CNY And NYS (excluding NYC) (Fig 10). As of 2020, there were about 434 opioid analgesic prescriptions per 1,000 Madison County residents.

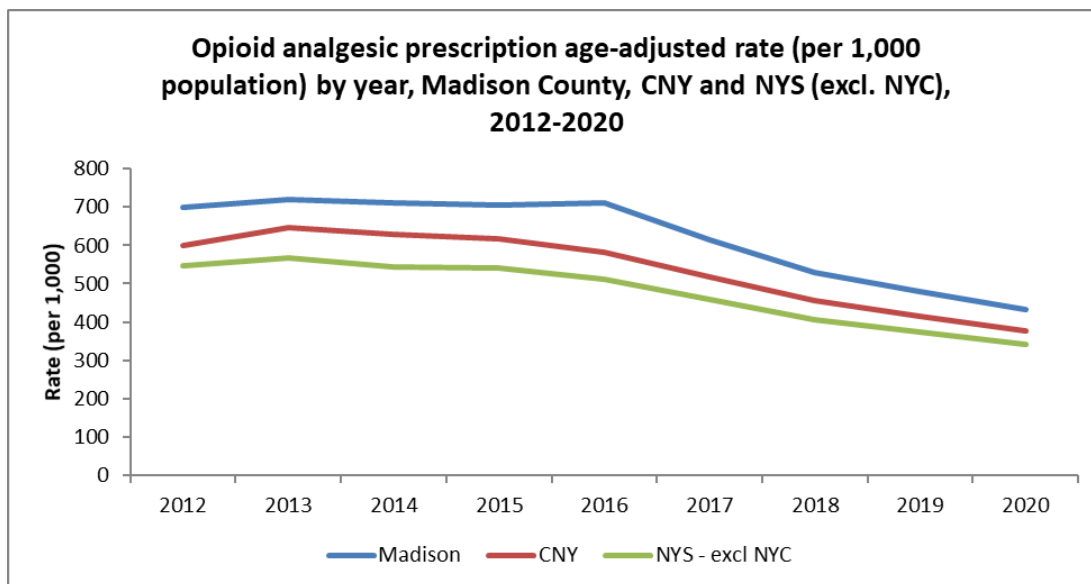


Figure 10. Opioid analgesic prescription rates, Madison County, CNY, and NYS (excluding NYC), 2012 – 2020. Source: NYSDOH, Opioid-related Data in New York State. Accessed 4/2022.

County Prescribing Trends

Opioid prescribing rates differ by county across New York State. Madison County falls within the highest third of opioid prescription rates, per 1,000 population, across the state (Fig 11, pg 13). The county has experienced a 6% decrease in the average 3-year opioid analgesic prescription rate between 2016 and 2019 (Fig 12, pg 13). Although this is impactful, other communities have experienced more significant decreases in prescribing trends. Please see the following page for prescribing trends among NYS counties.

County Prescribing Trends (cont.)

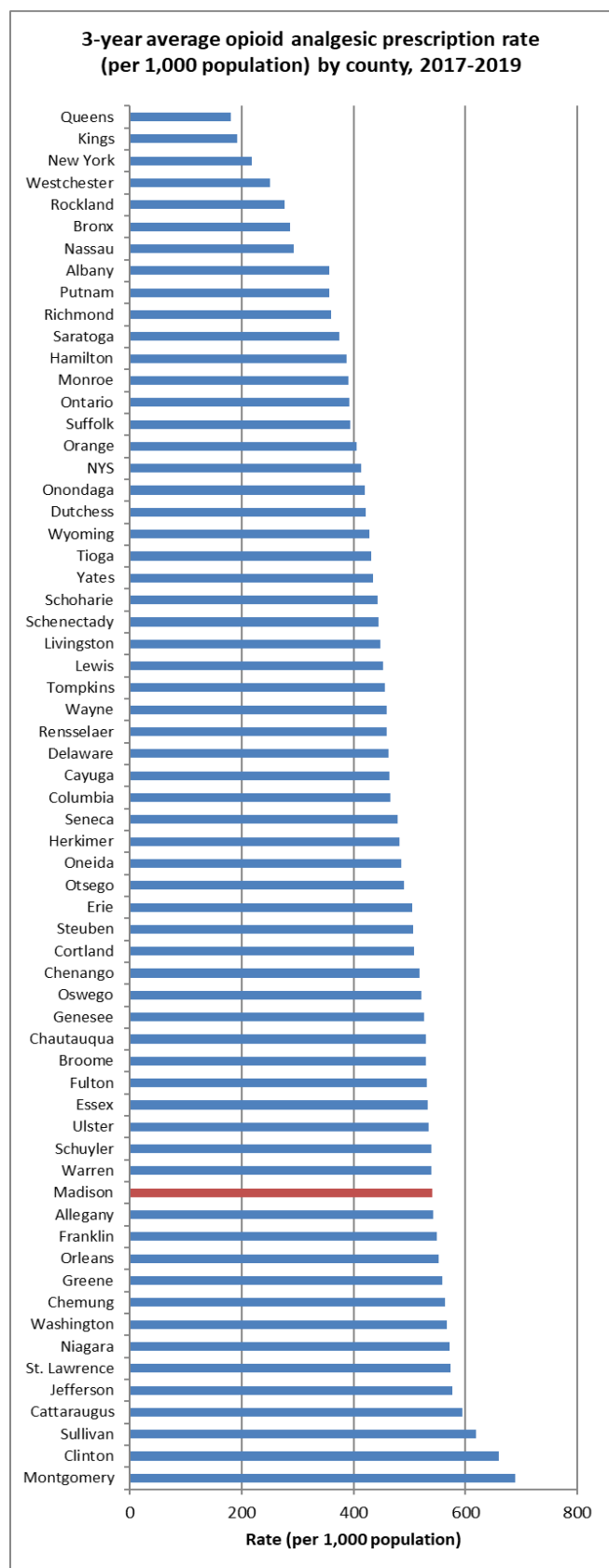


Figure 11. Opioid analgesic prescription rates by NYS county, 2019. Source: NYSDOH, Opioid-related Data in New York State. Accessed 10/2021.

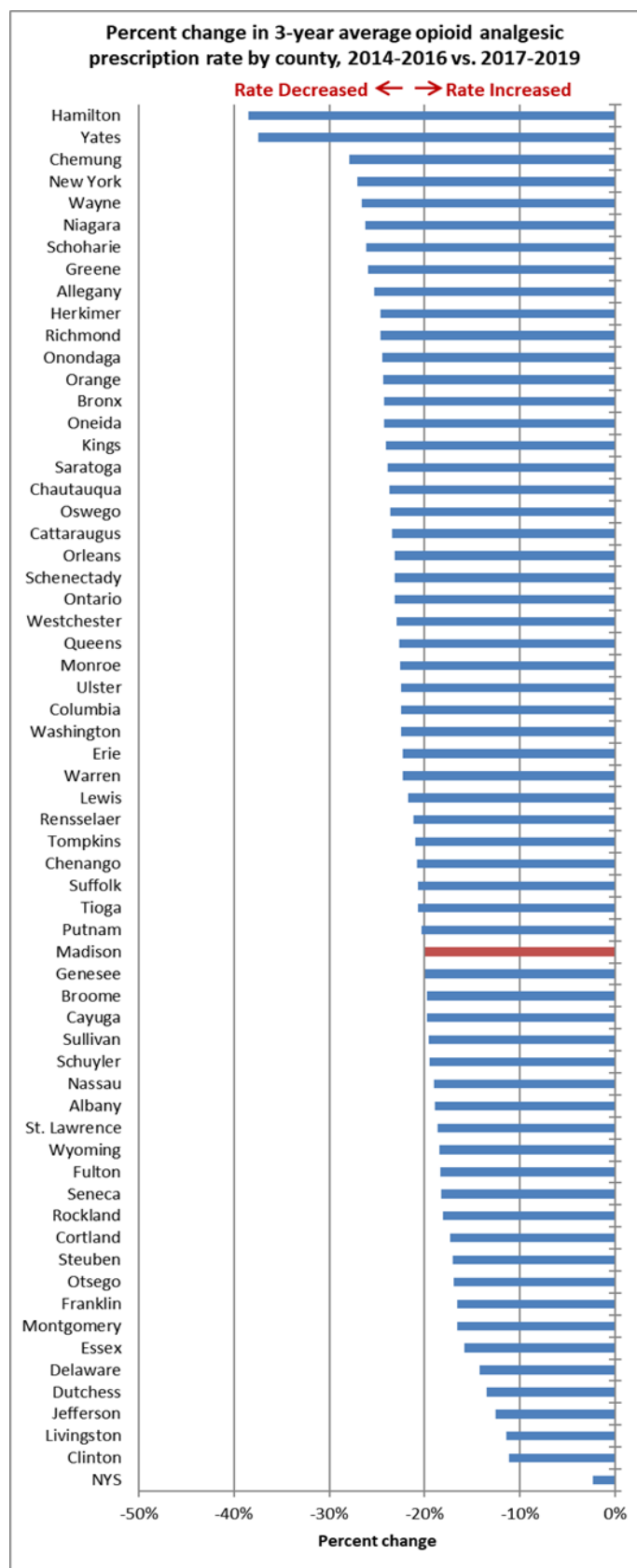


Figure 12. Percent change in 3-year average opioid analgesic prescription rates by NYS county, 2016 vs. 2019. Source: NYSDOH, Opioid-related Data in New York State. Accessed 10/2021.

Drug Sales

According to the American Society of Interventional Pain Physicians (ASIPP), the United States accounts for roughly 80% of the global opioid supply and 99% of the global hydrocodone supply, in spite of comprising only 4.6% of the world's population. During the height of retail opioid drug sales, the total amount of prescription painkillers written in 2012 was enough to provide every American adult with a bottle of pills.

The Automated Reports and Consolidated Ordering System (ARCOS) is a data collection system in which drug manufacturers and distributors report their retail transactions (to hospitals, retail pharmacies, practitioners, mid-level practitioners, and teaching institutions) of controlled substances to the Drug Enforcement Administration (DEA).

The graph below (Fig 13) displays retail opioid sales per 100,000 population in the Central New York region and New York State from 2006-2020. While the rate of opioid sales has been decreasing across the region and state since 2011, they remain higher in CNY than statewide with the exception of 2018. Please note though that oxycodone distribution was excluded from the CNY total in 2018 and likely accounts for the significant difference in the rate.

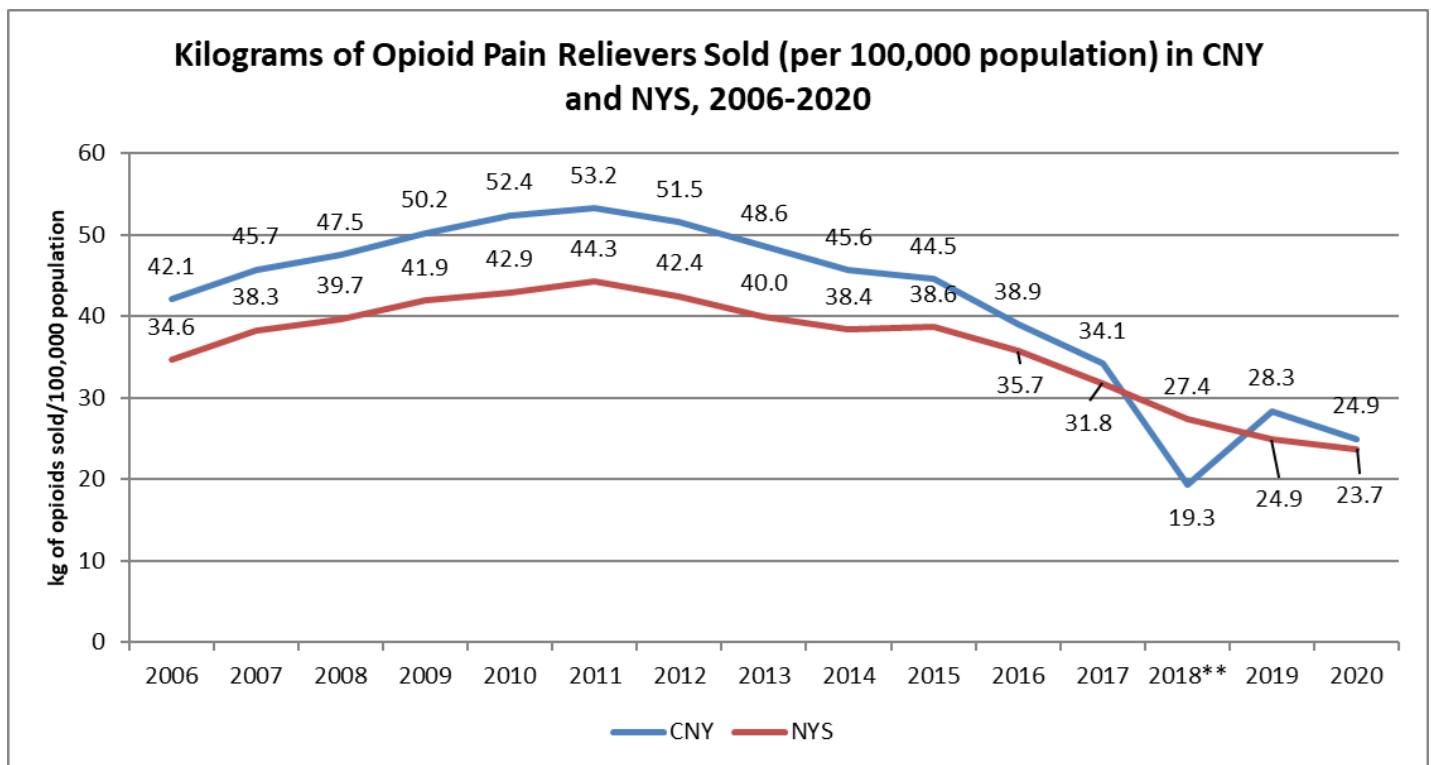


Figure 13. Opioid sales per 100,000 population in CNY and NYS, 2006 – 2020.

Drug sales data collected for: CNY zip codes 130XX-135XX; New York statewide; and drugs: Codeine, Fentanyl, Hydrocodone, Hydromorphone, Meperidine (Pethidine), Methadone, Morphine, and Oxycodone.

Source: Automated Reports and Consolidated Ordering System (ARCOS). Accessed 11/2021.

**Oxycodone distribution was excluded from CNY total, likely accounting for the significant difference between NYS and CNY rates.

Youth Drug Use

The 2018 Madison County Teen Assessment Project (TAP) Survey was administered by the Madison County Youth Bureau as part of an ongoing process to assess the risk and protective factors, developmental assets and resources present in the lives of adolescents in Madison County. The TAP Survey provides a voluntary, confidential, anonymous and structured process for obtaining responses to a wide range of questions from a large number of teens. The TAP survey will be completed again in 2022 and this information will be updated when available.

The 2018 TAP Survey collected 3,373 responses from students, grades 7-12 in Madison County school districts.

The survey is comprised of 72 questions that address student worries, tobacco, alcohol and other drug use, influences on behavior, perceptions of school and the community, relationships with parents and other adults, relationships with friends, mental health and perception of self, sexual behaviors and perceptions, sexual and physical abuse and violence and involvement in leisure time activities.

In 2018, 88.3% of TAP respondents indicated that using prescription drugs without a prescription can cause some or a lot of harm (Fig 14). This is a 19% increase from the 2014 TAP survey, indicating increased perceptions of risk with regards to prescription drug use. Despite this, proportion of students who used prescription drugs without a prescription in the past year (4.2%) remained consistent from 2014 (Fig 15). A greater proportion of respondents indicated that they never used heroin or other opiates, demonstrating improvement from 2014 (96.7%).

How much do you think people harm themselves if they use prescription drugs not prescribed to them?
Madison County, 7-12th grades (2018)

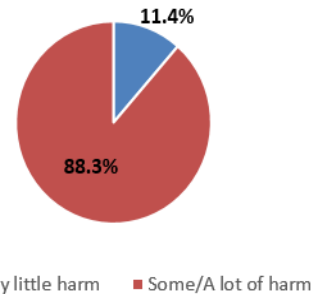


Figure 14. Adolescent perception of harm regarding use of non-prescribed prescription drugs, Madison County, 2018. Source: Madison County Youth Bureau, 2018. Accessed 12/2019.

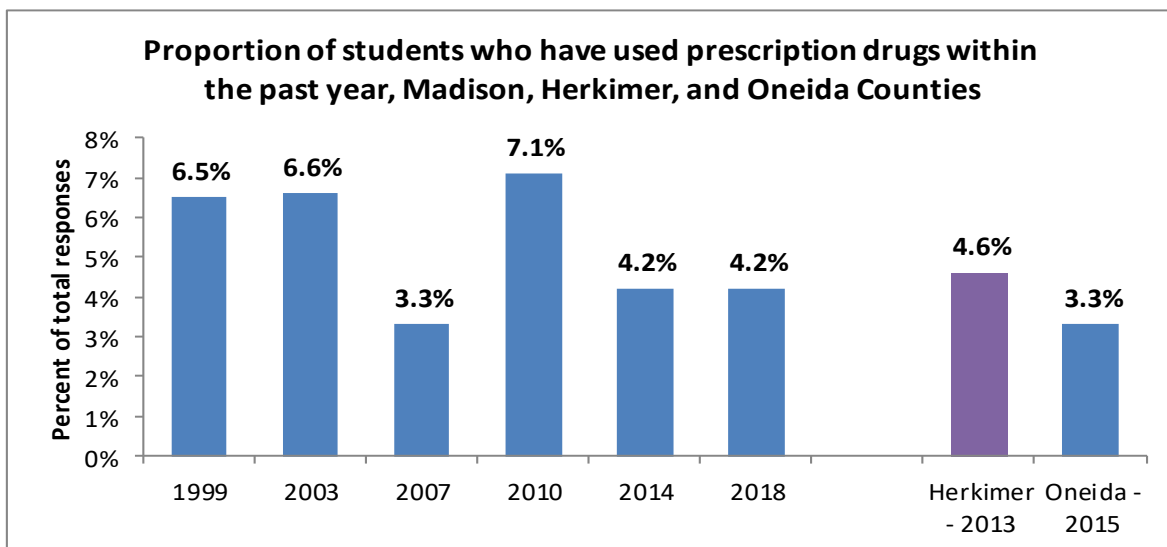


Figure 15. Adolescent prescription drug use with the past year in Madison County and neighboring counties, 2018. Source: Madison County Youth Bureau, 2018; Herkimer-Oneida Counties Comprehensive Planning Program, 2013 & 2015. Accessed 12/2019.

Treatment and Other Interventions

Opioid-Related Treatment Facility Admissions

In 2019, 4.2 million individuals received treatment for substance use disorder. Although more updated data is not currently available, it is estimated that less than one quarter of patients who met criteria for substance abuse treatment in 2020 received it (Addiction Resource, 2021).

The NYS Office of Alcoholism and Substance Abuse Services (OASAS) certified chemical dependence treatment programs report admissions of people served in programs throughout New York State. The annual number of opioid-related treatment admissions to OASAS certified chemical dependence programs rose from 2007-2016. Since 2016, the number of admissions among Madison County residents has declined (Fig 16). At its peak, there were over 5 times the number of admissions than in 2007. Nearly all (98%) were admitted and treated at facilities outside of Madison County.

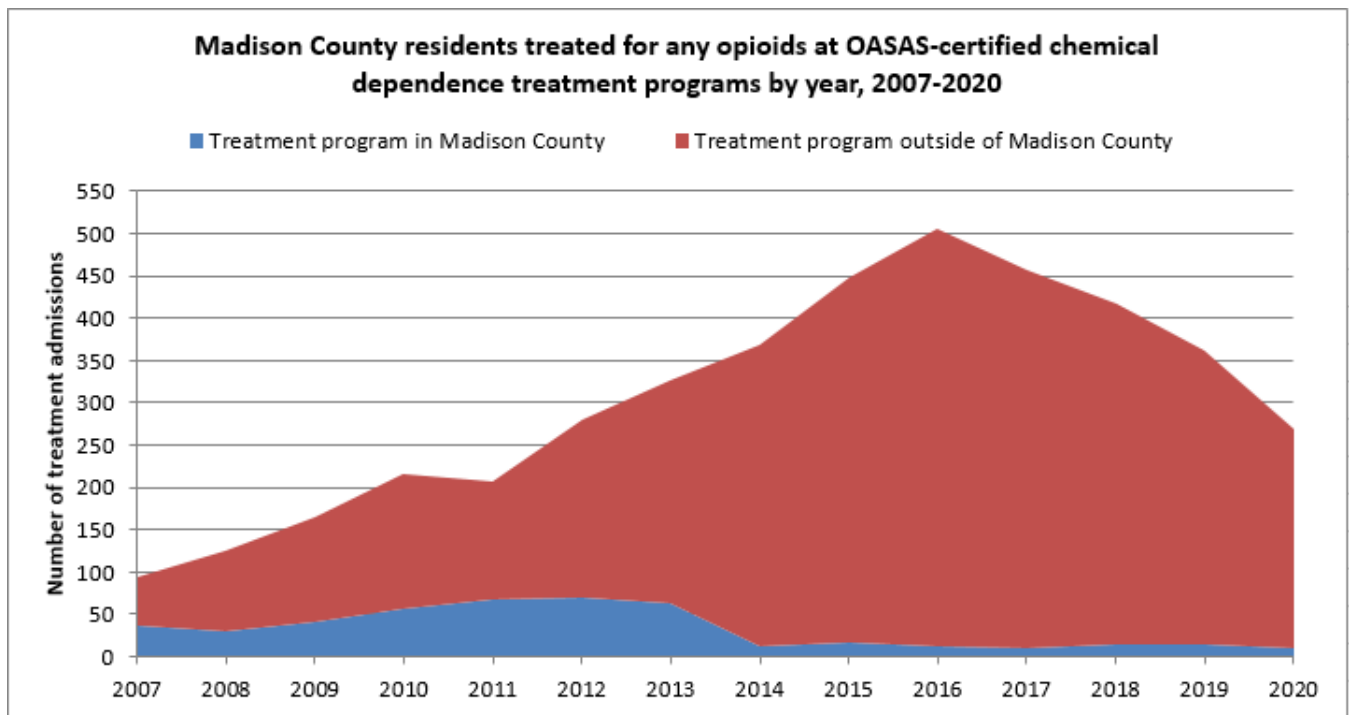


Figure 16. Admissions rates to OASAS-certified treatment programs for use of heroin and/or any opioid.

Source: NYSDOH, OASAS Data Warehouse. Note: Treatment admissions are not a unique count of individuals.

*Individuals may be admitted more than once in a given year. Requested 07/2021.

Naloxone Use to Prevent Overdose Deaths

Naloxone (commonly referred to by the brand name, Narcan®) is a life-saving drug that can reverse the effects of a prescription opioid and/or heroin overdose. Narcan® is non-addictive, and expanding training on how to administer the drug can help reverse opioid overdoses and support efforts by emergency medical services (EMS) to save more lives.

In New York State, regulations require that naloxone administration is reported and this information is made available to the public. The number of reported administrations of naloxone in Madison County by organizational type each year are shown in Figure 17. The number of administrations has risen sharply since 2019. EMS organizations continue to administer the most doses; however, the number of doses administered by registered community opioid overdose prevention (COOP) programs increased substantially in 2021.

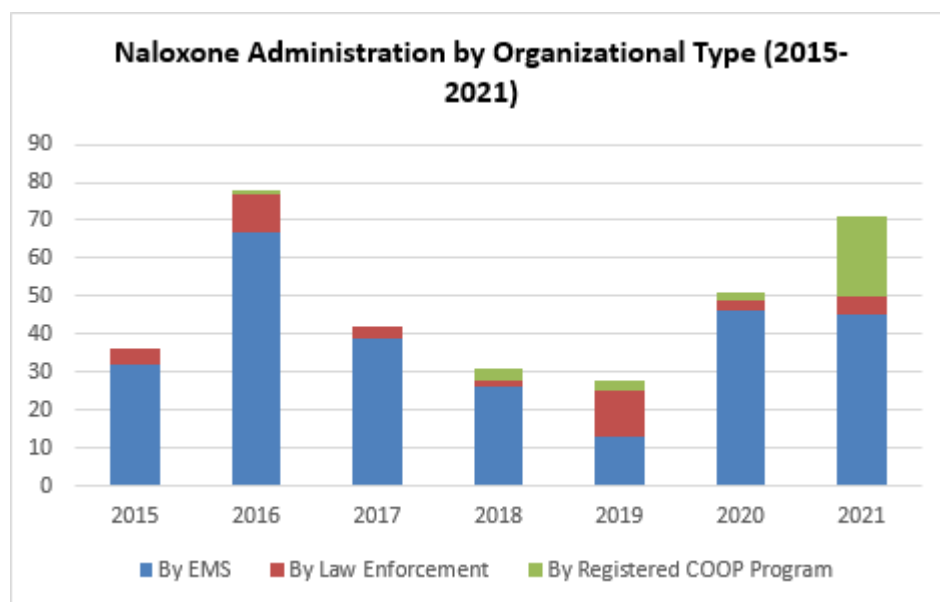


Figure 17. Naloxone Administration in Madison County by Organizational Type, 2015-2021. Source: NYSDOH, County Opioid Quarterly Report For Counties Outside of New York City. Accessed 10/2021.

Note: Naloxone administration reporting is mandated under regulation. All Naloxone administration data are based on self-report. Naloxone data in the report reflect the county in which the overdose occurred and in which the naloxone was administered—not necessarily the county of the overdosed person’s residence. Increases may represent expansion of program and may or may not indicate an increase in overdose events. COOP – Community Opioid Overdose Prevention.

Medication Collection Programs

From 2009-2018, the Madison County Council on Alcoholism and Substance Abuse, Inc. (BRiDGES) collaborated with the Madison County Sheriff’s Office and the Solid Waste Authority to collect unused medications from the public for safe disposal through bi-annual events. More than 10,000 pounds of medication were collected through this partnership.

Since then, permanent disposal kiosks for medication and syringes have been placed in various locations throughout Madison County, including the police stations in Cazenovia, Chittenango, and Hamilton, the New York State Police Troop D Headquarters in Oneida, and the lobbies of Madison County Department of Motor Vehicles and Department of Social Services in Wampsville. A kiosk will be established at the Mental Health Department in 2022. BRiDGES continues to collaborate with local police departments annually each April and October to assist in the organization and promotion of additional medication collection events.

Local Efforts to Address the Epidemic

Current Efforts

Efforts are currently underway to develop new and expand programs to support overdose prevention. Upcoming funding from the New York State Opioid Settlements will support treatment, recovery, and prevention efforts (NY Attorney General, 2022).

Previous & Ongoing Efforts

BRiDGES provides **Deterra bags** at no cost to businesses and other organizations throughout Madison County to have on hand to give out to their customers and consumers. Deterra bags are an alternative option for safe medication disposal for those who are unable to get to annual safe pill take-back events or to the permanent drug kiosks located throughout Madison County. Deterra bags deactivate prescription drugs, pills, patches, liquids, creams and films. Deterra renders them inert, unavailable for misuse and safe for the environment. In a simple 3-step process, a user deactivates the drugs by putting them in a Deterra pouch or container, adding water, shaking and throwing it away. BRiDGES collaborates with sites to have ongoing safe disposal policies in place.

In a cooperative effort, the **Sheriff's office**, **911 Center**, and **Emergency Management Services** have launched the **Overdose Detection Mapping Application Program (ODMAP)** in Madison County. ODMAP offers real-time data to support public safety and public health efforts to mobilize an immediate response to a sudden increase in overdose events. In addition to immediate response from first responders during spike events, the tool can be utilized for strategic initiatives.

In 2020, **BRiDGES** became a NYS registered **Opioid Overdose Prevention Program**, allowing for the **training and distribution of naloxone (Narcan®)**. Since that time, BRiDGES has trained and given out over 500 Narcan® kits in the community and in the region. Community members and organizations can request no-cost training in administering naloxone. Additionally, BRiDGES provides access to no-cost **fentanyl testing strips**. BRiDGES has distributed nearly 2,000 Fentanyl testing strips across the region since 2021.

The **Conference of Local Mental Hygiene Directors** advocated for state funding for **jail substance abuse services**. The funding was included in this year's state budget. The **Madison County Mental Health Department** issued an RFP for the jail substance abuse services and **Family Counseling Services of Cortland County** was the recipient of the award. The funding will be used to hire a qualified health professional to provide substance abuse services to all jail inmates in need, and will work closely with the jail social worker and the discharge planning coordinator.

The **Central Region Addiction Resource Center (CRARC)**, led by **BRiDGES**, has been working to increase knowledge of and access to appropriate services for Substance Use Disorders in Cayuga, Cortland, Madison, Onondaga, and Oswego counties since 2017 as part of the NYS OASAS response. The CRARC hosts a resource guide for the community and the CRARC app for download on any devices. The app contains names, locations, phone numbers, and websites for all Substance Use Disorder providers in the five-county region and is free to download. Staff from the CRARC support community events and work towards increased collaboration and partnerships among the region.

The **Madison County Mental Health Department** continues to host a 40-hour **Crisis Intervention Training** for law enforcement, an initiative that began in 2016. Most recently, the Department conducted a training in November 2021 with 12 Madison County Sheriff's Deputies and 3 officers from the City of Oneida Police Department.

Previous & Ongoing Efforts (cont.)

Helio Health's Center of Treatment Innovation is now available in Madison County. It provides outreach and mobile services to individuals struggling with an opioid use disorder. They offer peer-to-peer support networks, assistance with transportation, counseling services, personalized treatment programs, medication assisted treatment, and patient education. For more information please visit <https://www.sbh.org/center-treatment-innovation-coti/>.

A **Celebrate Recovery group** has started meeting at Church on the Rock. They have many other plans, and have established a Facebook page. BRiDGES has been attending some meeting to hand out resources and materials aimed at increasing the message around prevention and recovery.

Since 2003, many school districts in the county have collaborated with **BRiDGES** to implement the Botvin's **Life Skills Training Program**, which is a research validated substance abuse prevention program proven to reduce the risks of alcohol, tobacco, drug abuse, and violence by targeting the major social and psychological factors that promote the initiation of substance use and other risky behaviors. An opioid-specific lesson is taught by BRiDGES staff members during a 15-week curriculum in local school districts.

Madison County Jail started a **Vivitrol program** in the jail, beginning in July 2016. This program screens inmates for opiate problems and provides the first dose of Vivitrol while the inmate is in jail. While many jails and prisons only offer counseling and support groups for drug-addicted inmates, a growing number are treating inmates with drugs such as methadone, an opioid-based substance that eases withdrawal symptoms, or Vivitrol, a non-opioid, injectable medication that blocks the effects of both alcohol and heroin.

Oneida Health was approved by the NYS Department of Health to be a member of the **Registered Opioid Overdose Prevention Program** in 2018 and continues to give out Naloxone kits to someone that comes into the ED that has overdosed or has a loved one that is at risk of overdose.

Oneida Health is also participating in the **Iroquois Healthcare Association (IHA) Opioid Alternative Project** with the goal of reducing opioid administrations in the ED. This project employs new pain management guidelines, focusing on **Alternatives To Opioids (ALTO)** as a first resort in treating painful conditions. Oneida Health's goal is still to manage painful conditions for ED patients and return them to a maximum quality of life while also recognizing and controlling the inherent risks of prescribing highly addictive medications like opioids. **Dr. Kirby Black, ED Medical Director**, is spearheading this project, providing education and **training to the ED providers on the new treatment guidelines**.

HEAL— Heroin Epidemic Action League, a grassroots group formed in Cazenovia in spring of 2016. The group has met with the Governor and other Legislators to advocate for laws and services, and hosts monthly sober activities called "Saturday Nights Live." as started a support group for those impacted by heroin and opiate addiction that meets weekly at the Cazenovia Library. Support groups have also started in Morrisville, NY and Brookfield, NY. Members of HEAL started a Narcotics Anonymous group, and they advocate for issues related to heroin and opiate prevention, treatment, and recovery.

In March 2018, LeMoyne College awarded **Oneida Healthcare** grant funding to provide **ED physicians education on the judicious use and prescribing of opioids for the treatment of pain**. This included analysis of internal data and the review and tracking of prescribing patterns. In addition, physicians were given scripting guidelines for having difficult discussions with patients about opioids when non-opioid medications were prescribed. This educational information was shared with affiliated primary care physicians, and the offices were supplied with patient education materials on opioid use.

Previous & Ongoing Efforts (cont'd)

The Health Department implemented a targeted public awareness campaign. Materials and messaging from the national **multi-media campaign, Lock Your Meds®** (below) have been incorporated into Department Facebook messaging, and displayed in area movie theaters and on roadway billboards. The campaign focuses on three key messages: 1) locking up one's medications; 2) disposing of prescription medications properly; and 3) asking for alternatives. Further efforts will include promoting the Madison County medication disposal program, and conducting educational forums. Please see Appendix A (pages 25-26) for campaign results.

In September 2017, there was a **community walk** at Higinbotham Park in Oneida, NY, organized by Lyndon Joslyn. Over 100 people showed up to hear speeches, walk in Oneida, and learn about community resources. The goal was to raise awareness of opioid and heroin addiction that grips the community. The Mayor spoke, among others.

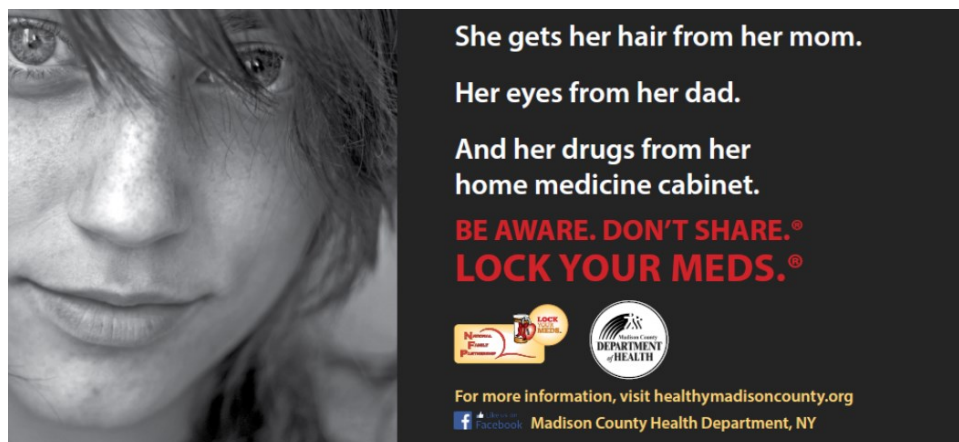
The Madison County Opioid Task Force works to address the various aspects of the problem locally. The group consists of mental health, public health, social services, emergency management, Sheriff's Office, BRiDGES Council on Alcoholism and Substance Abuse, and community providers all coming together to address the problem with heroin and opiates and to develop strategies to address concerns.

Survey of all local pharmacies to determine level of problems in Madison County, and how they dispose of medications. Hundreds of safe disposal handbills distributed to local pharmacies, both independent and chains.

Community Forum on Heroin and Opiates was held at Cazenovia High School in May 2016.

OASAS has provided funding for a half-time peer engagement specialist to work in hospital Emergency Departments (ED) to assist people who have presented to the ED because of an overdose or other issue related to addiction. The position serves Oneida Healthcare and their affiliate practices, and will expand to Community Memorial Hospital in Hamilton.

Appendix A. Billboard Campaign Results



Campaign Details

Madison County Health Department launched an opioid public awareness campaign from December 26, 2017 until June 25, 2018. A national campaign called *Lock Your Meds* was selected based on the findings from a previous provider detailing project and the Madison County Opioid Report. The campaign consisted of billboards, pharmacy fliers, and movie theater advertisements.

- ◆ Billboards ran on the following schedule:
 - Rt. 365 @ Jct. Sconondoa St. Dec-17 and Jan-18
 - S Rt. Jct. Rt. 13 Canastota Feb-18, Mar-18, and Apr-18
 - Rt. 20 Bouckville/ Madison Dec-17 and Jan-18
 - Rt. 12B Hamilton May-18
- ◆ Fliers were distributed to all area pharmacies for display and distribution
- ◆ Ads ran at both Oneida and Hamilton movie theaters

Measures

To assess the impact of the campaign the Health Department surveyed area residents before and after. The survey was created in survey monkey and distributed by email, Facebook, and through partnering community agencies.

Findings

The goal of this campaign was to increase public awareness and encourage proper disposal of unused medications. The post survey indicated the following. There was an overall increase in awareness of children abusing prescription drugs and locking your medications (Figure 24). We observed an increase in the proportion of people that reported seeing the ads on campaign billboards and in movie theaters. While storage habits did not change, more people are utilizing medication drop off site opposed to flushing them down the toilet.

Limitations

This campaign was run simultaneously with a New York State campaign, outreach by numerous community organizations, and during a time of increased coverage of the Opioid Crisis on a national level. The campaign goals were met however may not produce the same results at a later time.

Billboard Campaign Results (cont.)

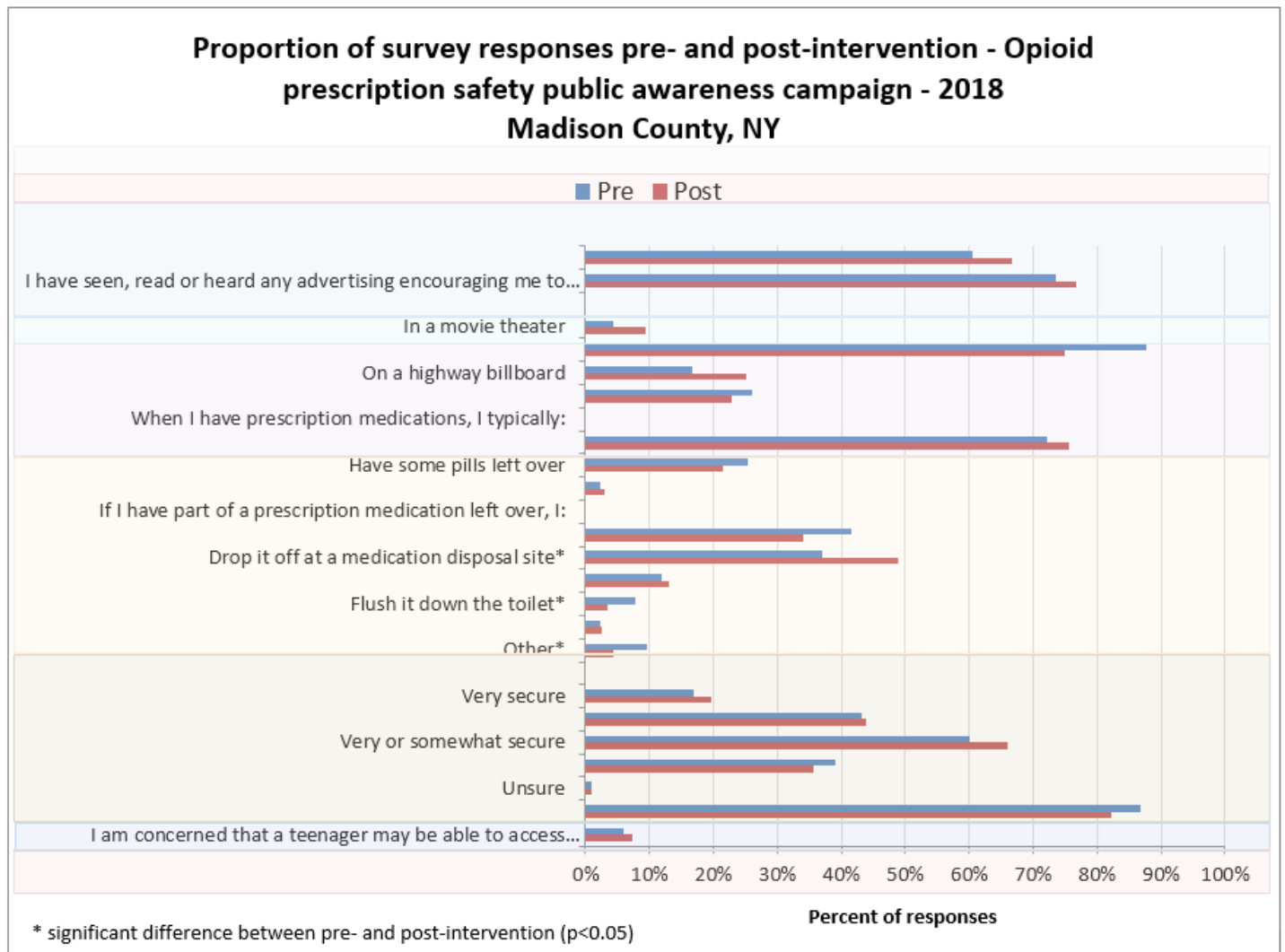


Figure 22. The proportion of survey responses reporting an awareness before and after the Opioid Prescription Safety Public Awareness Campaign (2018) in Madison County.

Appendix B. Data Tables

Table 1. Overdose Deaths — Madison County

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All opioid overdoses*	4	6	4	4	8	7	14	3	11	4	10
Heroin overdoses	0	2	1	1	3	2	9	0	8	1	2
Overdoses involving opioid pain relievers	4	5	3	3	5	7	11	3	9	4	10

*Indicators are not mutually exclusive. Decedents and patients may have multiple substances in their system. Thus, overdoses involving heroin and overdoses involving prescription opioid pain relievers will not add up to the overdoses involving all opioids.

Source: 2010-2013 — NYSDOH Vital Statistics; 2014-2020 — NYSDOH, New York State County Opioid Quarterly Reports. Accessed 4/2022.

Table 2. Opioid Death Demographics (2008-2018)

	All opioids	Opioid pain relievers	Heroin	Madison County population
	n (%)	n (%)	n (%)	%
Total overdose deaths	68 (-)	56 (-)	27 (-)	73,442 (-)
Sex				
Female	29 (43%)	23 (41%)	8 (30%)	50.9%
Male	39 (57%)	33 (59%)	19 (70%)	49.1%
Age				
<25	10 (15%)	8 (14%)	7 (26%)	35.5%
25-34	23 (34%)	18 (32%)	12 (44%)	9.7%
35-44	14 (21%)	14 (25%)	3 (11%)	12.0%
45-54	8 (12%)	6 (11%)	4 (15%)	16.2%
55-64	9 (13%)	7 (13%)	1 (4%)	12.8%
65+	4 (6%)	4 (7%)	0 (0%)	14.0%
Race				
White	66 (97%)	54 (96%)	24 (89%)	95.0%
Ethnicity				
Hispanic	3 (4%)	3 (5%)	2 (7%)	1.8%
Non-Hispanic	65 (96%)	53 (95%)	25 (93%)	98.2%
Education				
No high school diploma	13 (19%)	11 (20%)	3 (11%)	8.9%
High school graduate	31 (46%)	26 (46%)	11 (41%)	34.4%
Some college, no degree	11 (16%)	9 (16%)	6 (22%)	17.6%
Associate's degree	5 (7%)	4 (7%)	2 (7%)	12.0%
Bachelor's degree, or higher	2 (3%)	2 (4%)	1 (4%)	27.1%
Unknown	6 (9%)	4 (7%)	4 (15%)	-

Note: Opioid pain relievers and heroin are not mutually exclusive. Decedents may have multiple substances in their system; thus, overdoses involving heroin and overdoses involving prescription opioid pain relievers will not add up to the overdoses involving all opioids.

All poisoning deaths involving opioids were identified using causes of death defined by the following diagnostic codes from the International Classification of Diseases (ICD-10):

- All overdose deaths involving opioids: Underlying cause of death: X40-X44, X60-X64, X85, Y10-Y14 AND Any opioid in all other causes of death: T40.0, T40.1, T40.2, T40.3, T40.4, T40.6

- Overdose deaths involving heroin: Underlying cause of death: X40-X44, X60-X64, X85, Y10-Y14 AND Heroin in all other causes of death: T40.1

- Overdose deaths involving opioid pain relievers: Underlying cause of death: X40-X44, X60-X64, X85, Y10-Y14 AND Any opioid pain relievers in all other causes of death: T40.2, T40.3, T40.4

Source: New York State Department of Health (NYSDOH) vital statistics (https://www.health.ny.gov/statistics/vital_statistics/).

US Census Bureau. 2010 Decennial Census and 2017 American Community Survey (Education data). Available from: <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>. Accessed October 2019.

Data Tables (cont.)

Table 3. Hospitalization and Emergency Department Visit Rates (per 100,000 population) for Overdoses Involving Any Opioid

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Hospitalizations rate													
Madison County	s	8.6	s	9.5	12.4	12.4	16.6	11.1	22.3	14.0	s	14.1	11.3
CNY	9.4	13.6	14.8	16.1	16.7	18.6	17.4	18.6	21.1	16.3	14.1	13.6	43.4
NYS (excl. NYC)	12.1	13.0	14.3	16.1	16.2	16.9	17.3	16.7	16.9	17.4	15.1	13.7	14.0
Emergency department visit rate													
Madison County	8.6	s	13.6	9.5	12.4	26.2	51.1	45.9	73.8	37.9	47.9	31.0	47.9
CNY	12.4	12.9	14.9	17.5	22.5	32.3	37.4	53.8	89.9	66.1	59.8	61.7	55.9
NYS (excl. NYC)	11.3	11.7	13.2	15.8	18.0	25.0	30.2	41.0	59.4	64.4	53.0	49.0	53.3

s: Data for indicator are suppressed for confidentiality purposes if there are less than 6 discharges.

Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 10/2021.

Table 4. Opioid Analgesic Prescription Age-Adjusted Rate (per 1,000 population)

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Madison County	682.4	699.4	698.4	687.5	640.4	580.0	528.1	478.1	433.9
CNY	601.1	646.9	630.3	612.9	561.9	509.9	454.6	414.5	377.4
NYS (excl. NYC)	545.4	566.4	543.6	537.6	496.2	453.1	407.5	372.7	342.6

Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 10/2021.

Table 5. Neonatal Abstinence Syndrome 3-year Average Rate per 1,000 newborn discharges

	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2016-2018
Madison County	2.8	3.4	3.4	4.6	5.6	6.1	6.6	9.1	27.1
CNY	2.5	3.0	3.6	4.0	5.1	5.8	6.7	7.6	32.1
NYS (excl. NYC)	2.0	2.4	2.9	3.4	4.3	5.1	6.4	7.4	13.3

NOTE: 2015 data excluded due to transition from ICD-9 to ICD-10. Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 10/2021.

Table 6. Neonatal Abstinence Syndrome Rate per 1,000 newborn discharges

	2007	2008	2009	2010	2011	2012	2013	2014	2016	2017	2018
Madison	0	0	0	9.8	0	0	11.7	15.7	25.2	34.7	21.4
CNY	3.3	3.7	3.8	4.6	7.0	5.7	7.4	9.8	30	31.4	34.9
NYS (excl. NYC)	2.4	3.0	3.4	3.9	5.6	5.7	7.9	8.5	16.0	10.0	14.0

*The reported cases are based on the county of residence. Opioids include both prescription opioid pain relievers such as hydrocodone, oxycodone, and morphine, as well as heroin and opium. 2015 data excluded due to transition from ICD-9 to ICD-10.

Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 10/2021.

Data Tables (cont.)

Table 7. Drug Sales (Kilograms of Opioid Pain Relievers Sold per 100,000 population)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CNY	42.1	45.7	47.5	50.2	52.4	53.2	51.5	48.6	45.6	44.5	38.9	34.1	19.3*
NYS	34.6	38.3	39.7	41.9	42.9	44.3	42.4	40.0	38.4	38.6	35.7	31.8	27.4

Drug sales data collected for: CNY zip codes 130XX-135XX; New York statewide; and drugs: Codeine, Fentanyl, Hydrocodone, Hydromorphone, Meperidine (Pethidine), Methadone, Morphine, and Oxycodone. Source: Automated Reports and Consolidated Ordering System (ARCOS).

*Sales of oxycodone was excluded from CNY total in 2018

Table 8. Teen Assessment Project (TAP) Survey Results — Madison County

	1999	2003	2007	2010	2014	2018
How much do you think people harm themselves if they use prescription drugs not prescribed to them?						
No/Very little harm					12.3%	11.4%
Some/A lot of harm					74.2%	88.3%
Don't know					13.5%	0.0%
How often you use prescription drugs (such as Oxy-Contin, Percocet, Vicodin, Codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription?						
Never used	88.3%	89.1%	94.6%	89.3%	93.3%	93.4%
Did use, but stopped	5.2%	4.3%	2.1%	3.6%	2.5%	2.4%
Have used within the last year	6.5%	6.6%	3.3%	7.1%	4.2%	4.2%
How often you use Heroin or other Opiates?						
Never used					96.7%	98.4%
Did use, but stopped					0.8%	0.3%
Have used within the last year					2.5%	1.2%

Source: Madison County Youth Bureau, 2018

Data Tables (cont.)

Table 9. Opioid Analgesic Prescription Age-Adjusted Rate (per 1,000 population) and percent change (2014-2016 vs. 2017-2019), for all New York State Counties

County	2014-2016	2017-2019	Percent change
Albany	439.0	356.1	-19%
Allegany	725.8	542.4	-25%
Bronx	378.0	286.3	-24%
Broome	660.6	529.9	-20%
Cattaraugus	775.8	594.3	-23%
Cayuga	577.7	463.7	-20%
Chautauqua	694.4	529.7	-24%
Chemung	780.5	562.7	-28%
Chenango	653.8	518.0	-21%
Clinton	742.1	659.1	-11%
Columbia	600.0	465.2	-22%
Cortland	615.8	508.9	-17%
Delaware	539.0	462.3	-14%
Dutchess	486.7	421.2	-13%
Erie	650.4	505.3	-22%
Essex	631.6	531.9	-16%
Franklin	658.6	549.2	-17%
Fulton	649.2	530.2	-18%
Genesee	656.4	525.3	-20%
Greene	754.8	558.8	-26%
Hamilton	631.2	388.2	-38%
Herkimer	639.2	481.7	-25%
Jefferson	658.3	576.0	-13%
Kings	253.3	192.4	-24%
Lewis	579.0	453.5	-22%
Livingston	505.7	448.0	-11%
Madison	675.5	540.6	-20%
Monroe	505.6	391.4	-23%
Montgomery	825.6	688.8	-17%
Nassau	362.7	293.7	-19%
New York	300.0	218.7	-27%
Niagara	775.6	572.4	-26%

County	2014-2016	2017-2019	Percent change
Oneida	640.6	485.2	-24%
Onondaga	556.3	420.6	-24%
Ontario	510.4	392.6	-23%
Orange	535.8	405.6	-24%
Orleans	717.9	551.7	-23%
Oswego	683.1	521.9	-24%
Otsego	590.7	490.5	-17%
Putnam	447.1	356.2	-20%
Queens	232.7	180.1	-23%
Rensselaer	583.3	460.0	-21%
Richmond	478.0	360.3	-25%
Rockland	336.8	276.0	-18%
Saratoga	492.9	375.1	-24%
Schenectady	579.1	445.3	-23%
Schoharie	599.9	443.4	-26%
Schuyler	669.0	538.5	-20%
Seneca	585.3	478.5	-18%
St. Lawrence	705.6	574.0	-19%
Steuben	610.2	506.3	-17%
Suffolk	497.6	394.5	-21%
Sullivan	768.6	618.4	-20%
Tioga	544.3	431.7	-21%
Tompkins	576.8	456.0	-21%
Ulster	689.6	534.4	-23%
Warren	693.8	539.3	-22%
Washington	731.4	567.3	-22%
Wayne	624.1	458.5	-27%
Westchester	326.5	251.6	-23%
Wyoming	524.4	427.7	-18%
Yates	695.0	434.8	-37%
NYS	423.4	413.5	-2%
NYS, excl. NYC	532.5	413.5	-25.2%

Source: NYSDOH, New York State County Opioid Quarterly Reports. Accessed 10/2021.

Data Tables (cont.)

Table 10. Prescription Opioid Awareness Pre/Post Survey Results — Madison County (2018)

	Pre	Post	Pre vs. Post	
	n (%)	n (%)	OR (95% CI)	p-value (x ²)
I have seen, read or heard any advertising about children abusing prescription drugs	134 (60.6%)	154 (66.7%)	1.30 (0.88-1.91)	0.1824
I have seen, read or heard any advertising encouraging me to lock up my medications to prevent pre-	162 (73.6%)	177 (76.6%)	1.17 (0.77-1.80)	0.4630
I recall seeing or hearing this ad:				
In a movie theater	7 (4.3%)	16 (9.4%)	2.30 (0.92-5.75)	0.0678
Online*	143 (87.7%)	128 (74.9%)	0.42 (0.23-0.74)	0.0026
On a highway billboard	27 (16.6%)	43 (25.1%)	1.69 (0.99-2.90)	0.0541
What I saw, read, or heard caused me to change my prescription medication storage habits	55 (25.9%)	50 (22.8%)	0.84 (0.54-1.31)	0.4517
When I have prescription medications, I typically:				
Take them until they are gone	159 (72.3%)	173 (75.5%)	1.19 (0.78-1.81)	0.4296
Have some pills left over	56 (25.5%)	49 (21.4%)	0.80 (0.51-1.24)	0.3100
Unsure	5 (2.3%)	7 (3.1%)	1.36 (0.42-4.34)	0.6066
If I have part of a prescription medication left over, I:				
Keep it in case I need it later	91 (41.6%)	78 (34.1%)	0.79 (0.50-1.07)	0.1020
Drop it off at a medication disposal site*	81 (37%)	112 (48.9%)	1.63 (1.12-2.38)	0.0109
Throw it in the trash	26 (11.9%)	30 (13.1%)	1.12 (0.64-1.96)	0.6944
Flush it down the toilet*	17 (7.8%)	8 (3.5%)	0.43 (0.18-1.02)	0.0491
Return it to the pharmacy	5 (2.3%)	6 (2.6%)	1.15 (0.35-3.83)	0.8178
Other*	21 (9.6%)	10 (4.4%)	0.43 (0.20-0.94)	0.0295
When I think about where I keep my medications, I think it is:				
Very secure	37 (16.8%)	45 (19.7%)	1.22 (0.75-1.97)	0.4245
Somewhat secure	95 (43.2%)	100 (43.9%)	1.03 (0.71-1.49)	0.8850
Very or somewhat secure	132 (60%)	145 (65.9%)	1.29 (0.87-1.90)	0.1994
Not secure	86 (39.1%)	81 (35.5%)	0.86 (0.59-1.26)	0.4354
Unsure	2 (0.9%)	2 (0.9%)	0.96 (0.13-6.91)	0.9714
I agree with the CDC labeling prescription drug abuse a national epidemic.	191 (86.8%)	190 (82.3%)	0.70 (0.42-1.18)	0.1806
I am concerned that a teenager may be able to access medications in my home.	13 (5.9%)	17 (7.4%)	1.27 (0.60-2.68)	0.5283
Total Responses	221	231	—	—

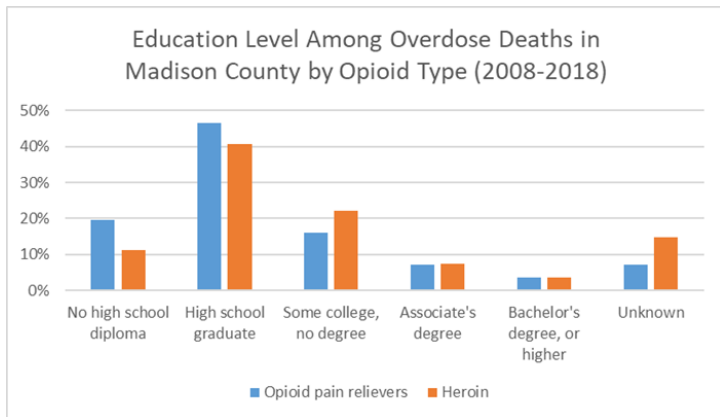
Source: Madison County Department of Health. Not all respondents responded to all questions. P-value determined by chi-squared test (x²).

*Significant difference between pre- and post-intervention (p<0.05)

Appendix C. Archived Data

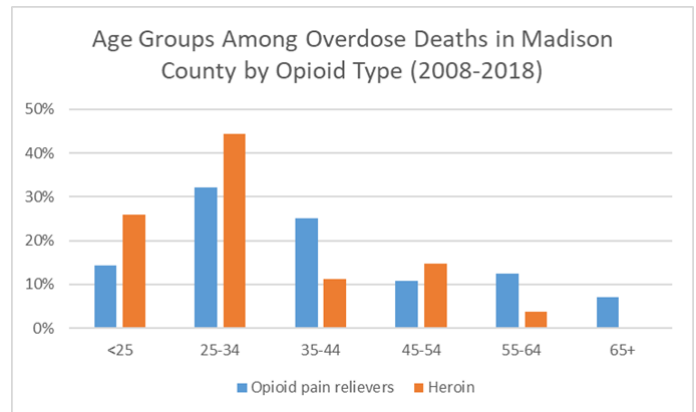
Overdose Deaths

Historically, opioid overdose deaths in Madison County have disproportionately affected people 25–34 years, male, non-Hispanic White, and those with high school or some college education. Data unavailable to update.



Overdose deaths by education level and type in Madison County, 2008-2018.

Note: Opioid pain relievers and heroin are not mutually exclusive. Source: NYSDOH Vital Statistics. Accessed 12/2019.

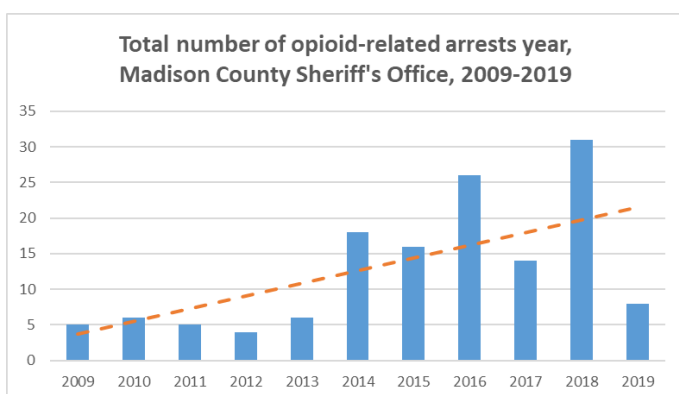


Overdose deaths by age group and type in Madison County, 2008-2018.

Impact on Communities and Families

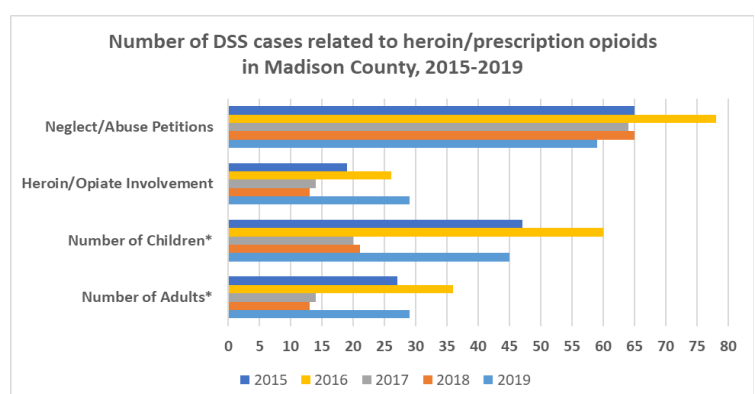
Drug-Related Arrests & Child Neglect and Abuse

The opioid epidemic has had a significant impact on the community and families of Madison County, including opioid-related drug charges and incidents involving Child Protective Services. Data unavailable to update.



The total number of opioid-related arrests by the Madison County Sheriff's Office, 2009–2019.

Source: Madison County Sheriff's Office. Accessed 01/2020.

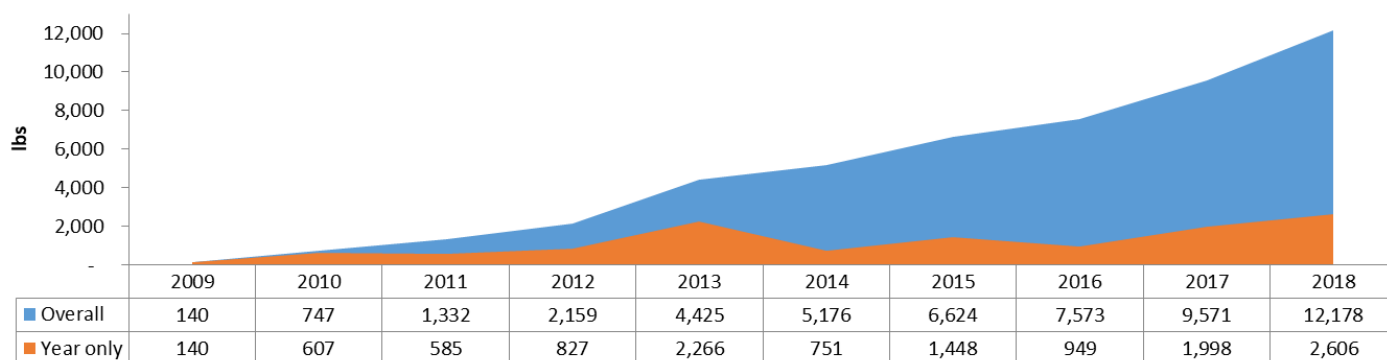


Madison County Department of Social Services Child Protective Services reports related to heroin/prescription opioids, 2015–2019. *Number of children and adults involved with heroin/opiate cases only. Source: Madison County DSS. Accessed 01/2020.

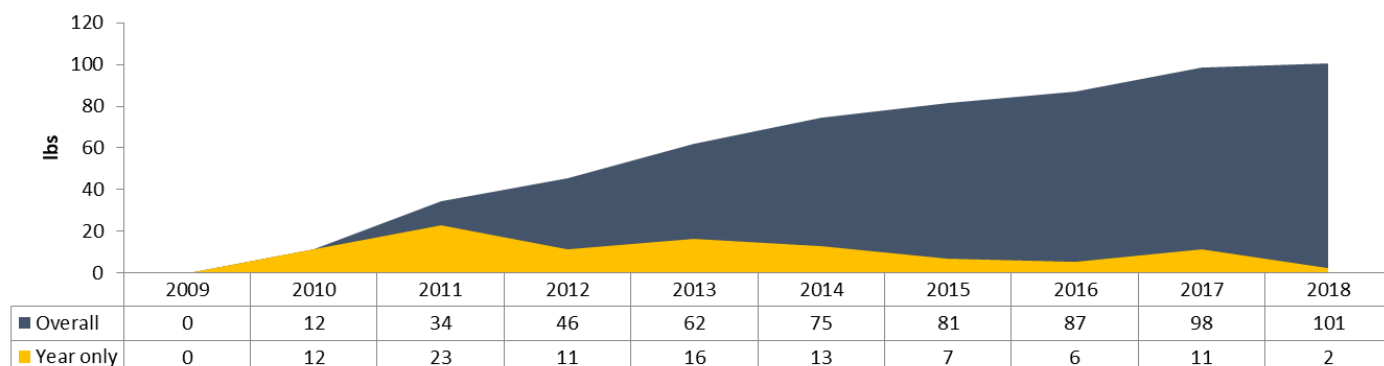
Medication Collection Program

From 2009-2018, a joint effort between the Madison County Council on Substance Abuse and Alcoholism (BRiDGES) and the Madison County Sheriff's Office and Solid Waste collected unused medications from the public for safe disposal. Medications were collected at kiosk sites throughout the county and bi-annual events hosted by Solid Waste. Over 9,500 pounds of pills were collected over 10 years. The amount of pills collected in 2018 was the highest of any year of the program (2,606 pounds). This data is no longer being collected.

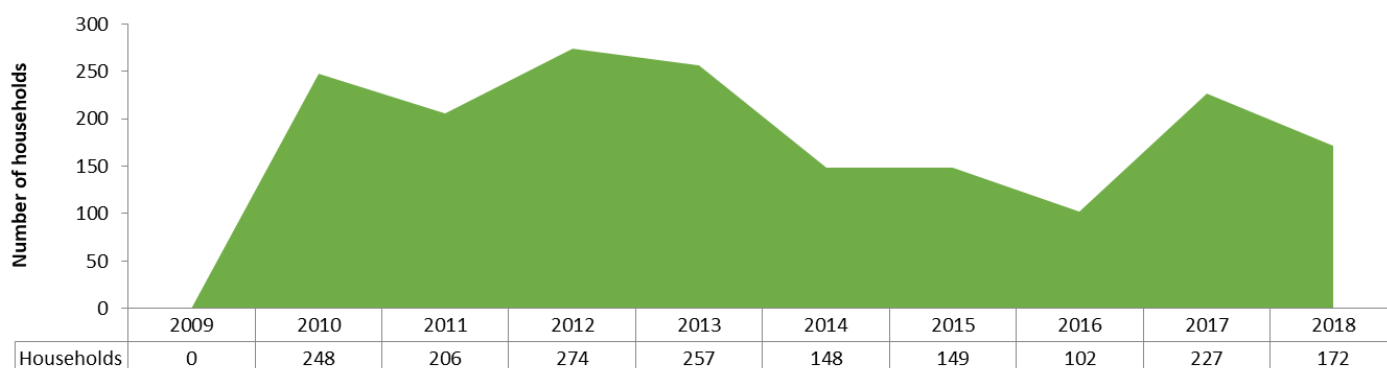
Total pounds of medication collected from the bi-annual pill collections at Madison County Solid Waste and kiosk sites*, overall and by year, 2009-2018



Total pounds of controlled substances collected from the bi-annual pill collections at Madison County Solid Waste, overall and by year, 2009-2018



Total number of households utilizing the bi-annual pill collections at Madison County Solid Waste, by year, 2009-2018



Medication collection program totals and household participation by year, Madison County, NY.

*These numbers do not include the medication collected at the NYS Troopers at Troop D or the kiosk at Chittenango P.D.

Source: BRiDGES.

Sources

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